

### Knowledge and Practices of Physicians regarding prescription of Antibiotics in the treatment of Upper Respiratory Tract Infection, Riyadh, 2006.

Upper respiratory tract infection (URTI) is a nonspecific term used to describe acute infections involving the nose, ear, nasal sinuses and throat. Although 90-95% of URTI are viral in origin, antibiotics are often used for treatment. This study was conducted to assess knowledge, and reported practices of physicians toward prescribing antibiotics in treatment of URTI.

A cross-sectional study was conducted covering both governmental hospitals and PHCCs in Riyadh city. Stratified random cluster sampling was used to obtain 2 hospitals and 10 PHCC that were sampled randomly. The study involved 267 physicians, 144 (53.9%) from hospitals and 123 (46.1%) from PHCCs. Their mean age was 40.3 years (SD  $\pm$  8.3), 93 (34.8%) were males and 174 (65.2%) were females. Saudi nationality constituted 53 (19.9%). Most of the physicians were general practitioners 119 (44.6%), specialists 83 (31.3%) and residents 65 (24.3%).

Over half (62.1%) reported being able to differentiate between bacterial and viral infection by physical examination, 56.6% by history of the patient, 52.1% by general appearance of the patient, 43.1% by nasal and throat swab, 39.0% by blood investigation, 3.7% did not try to differentiate and 1.9% thought that none of these investigations could differentiate between bacterial and viral infection.

Out of the total physicians, 86.5% reported prescribing antibiotics for URTI patients and 13.5% never did. Reasons stated by those who prescribed antibiotics for URTI cases are documented in Table 1. The most common antibiotics prescribed were Amoxicillin 57.3%, Augmentin 22.5%, Erythromycin 14.3%, Azithromycin 7.8%, Ampicillin 6.9%, Penicillin 5.6%, Cephalosporin 4.8%, and Ampicillin + cloxacillin 3.9%.

Different factors thought to limit the prescription of antibiotics in URTI treatment were: availability of evidence of no benefit 61.5%, and an official policy of no antibiotic use 22.1%.

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## Knowledge and Practices of Physicians regarding use of Antibiotics in the treatment of Upper Respiratory Tract Infection, cont...

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All the physicians who did not prescribe antibiotics stated that most URTIs are of viral etiology. Out of 36 physicians who did not prescribe antibiotics for URTIs, 58.3% stated that URTIs were self limiting, 19.4% stated that antibiotics were of no benefit, and 13.9% were fearful of their side effects.

The major causes stated for starting antibiotic therapy on the first examination of an URTI case were: severely ill-looking appearance of patient 82.8%, if patient had high grade fever 58.8% and the patient's favorable response to antibiotics in previous URTI 15.0%.

Most physicians (88.8%) agreed that there was a risk associated with prescribing unnecessary antibiotics, 10.2% did not agree, and 1.0% did not know. Among physicians who believed that there was a risk, stated risks were bacterial resistance 91.0%, diarrhea and vomiting 69.9%, fungal and commensal growth 69.4%, unnecessary cost 58.0%, allergy 55.8%, decreased immunity 45.1%, and renal and hepatic complications 42.1%.

Of the total, 76.4% agreed that there was a general over-prescription of antibiotics, 11.6% thought there was no over-prescription, and 12.0% were not sure. Reasons given for over-prescription were: uncertainty of diagnosis 53.6%, patient having combined conditions 30.3%, patient demand 28.8%, physician belief in efficacy of antibiotics 26.2%, patient appearance of severe illness 19.5%, and patient leaving the city and requesting antibiotics 9.7%.

– Reported by: Dr. Badria A. AlMalki, Dr. Abdul Jamil Choudhry (Field Epidemiology Training Program).

**Editorial Notes:** Antibiotic over-prescription is a major health problem world wide. It is one of the contributing factors to antibiotic-resistant bacteria. Antibiotics are frequently prescribed for the management of URTI, in spite of the fact that the majority of these infections are viral in origin.

In this study, the majority of physicians at both PHCCs and hospitals (86.5%) prescribed antibiotics for URTI patients. A study in northern in Saudi Arabia showed similar results.<sup>1</sup> This is different from other parts of the world, such as the USA where the proportion of antibiotic prescription previously reported was 48.0%.<sup>2,3</sup>

While most of physician's practices were satisfactory, some practices deviated from the correct. Some physicians inappropriately prescribed antibiotics although they recognized that most of the infections are viral.

The main reason behind prescribing antibiotics for URTI could be related to diagnostic uncertainty. A second very important factor is pressure from patients and their relatives.<sup>4</sup> A third issue is loss of a trusting relationship between the patient and the physician. These factors combined may encourage a defensive treatment approach, which includes excessive antibiotic use. A fourth issue relates to the patients expectation of antibiotic therapy when seeking treatment, which may be the purpose of their office visit.

Most physicians stated prescribing antibiotics to prevent secondary bacterial infection. However, antibiotic administration do not reduce the incidence of these infections.<sup>4</sup> Also, physicians agreed that overuse of antibiotics was a major factor contributing to development of antibiotic

resistance. This has been documented in several surveys.<sup>2,3</sup> Diarrhea and vomiting increase growth of fungi and commensals, decrease immunity, allergy, unnecessary cost and serious renal and hepatic complications were risks that could occur due to antibiotic over-prescription. The immediate hazards, however, are their side effects and additional cost of therapy.<sup>2,3</sup>

In this study, Amoxicillin, Augmentin and other broad-spectrum antibiotics were found to be the most significantly prescribed antibiotics. Increasing use of broad-spectrum antibiotics has important implications for bacterial resistance, and they provide little clinical advantage over narrow-spectrum antibiotics or no antibiotic therapy at all.<sup>2,3</sup> It seems that physicians have increased their reliance on newer, largely broad-spectrum antibiotics, which may breed a new crisis in antibiotic resistance. By prescribing antibiotics for URTI a substantial proportion of resources are used for non-indicated and ineffective treatments.<sup>5</sup>

Physicians who had received short training courses or had read guideline or protocol had better practices compared to others.

Antibiotic prescription for URTI patients remains a common problem. The study reinforces the need for training courses for physicians and the need to implement forthwith the Saudi national program for diagnosis and treatment of RTI. The high rates of antibiotic prescription, the wide variations in practice patterns, and the strong association of non-clinical factors with antibiotic choice suggest opportunities to improve prescription patterns.

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**Table 1: Reasons for prescribing antibiotics for URTI patients (N= 240)**

| Type of virus  | No. | χ    |
|--|-----|------|
| Prevention of secondary bacterial infection                      | 138 | 57.5 |
| Relief of symptoms and signs of infection                        | 57  | 23.8 |
| Shortening the duration of illness                               | 55  | 23.0 |
| Inability to differentiate between bacterial and viral infection | 43  | 18.0 |
| Demand / pressure from patient or relatives                      | 29  | 12.1 |
| Suspicion of bacterial infection                                 | 25  | 10.4 |
| Reading relevant articles including treatment with antibiotics   | 18  | 7.5  |
| Advice from more experienced physicians                          | 12  | 5.0  |

# Knowledge, Attitude and Practice of physicians working in Primary Health Care centers towards Acne vulgaris.

Acne vulgaris is an extremely common inflammatory skin disorder. This study was carried out to assess the knowledge, attitude, and practices of Primary Health Care Physicians (PHCPs) towards acne vulgaris and its management in Riyadh city.

A cross-sectional study was conducted, where 30 out of 68 Primary Health Care Centers (PHCCs) were randomly selected, representing about 44% of all PHCCs in Riyadh. All 144 physicians (76 males, 68 females) in the selected PHCCs were approached. During the months of June, July and August 2000, a self-administered anonymous confidential questionnaire was distributed, composed of 34 items including demographic data, questions related to knowledge, attitude and practice regarding acne vulgaris, measures that improve PHCPs ability in managing patients with acne vulgaris, and suggested measures to improve the PHCC to become more suitable for management of acne vulgaris. Grading of PHCPs knowledge was by using a scoring scale where each item was given a score of one for each correct answer and zero for each incorrect answer. Knowledge on acne vulgaris was categorized into poor or good based on the distribution of the scores. Those whose scores fell below one standard deviation of the mean were categorized as having poor knowledge (score of 32).

Between June and August 2000, a total of 144 (PHCPs) from 30 PHCC had responded, with a response rate of 92.4%. There were 76 males (52.8%) and 68 females (47.2%), with a ratio of 1.1:1. The mean age ( $\pm$ SD) was (42.7 years  $\pm$ 8.5). Only 17 were Saudis (11.8%); 2 males and 15 females. Most had no postgraduate qualifications (92.2%). The mean duration of experience in PHC was (9.7 years  $\pm$  7.34).

Acne vulgaris was regarded, correctly, as a common skin condition in Saudi Arabia by the majority of PHCPs (71.8%). Hormonal factors were considered to be the cause of acne vulgaris by 117 (81.3%) and bacterial causes (*Propionibacterium acnes*) by 82 (57%), 55 (38%) considered that the exact cause of acne vulgaris is still unknown, and 11 (7.6%) were not sure.

According to the PHCPs' opinion, 128 (89%) and 107 (74.3%) believed that the common presentation of acne vulgaris are comedones (white or black heads) and pustules respectively.

Stress, cosmetics, sweating and foods were considered as factors that made acne worse by 122 (84.7%), 100 (69.4%), 76 (52.8%) respectively.

Regarding knowledge of drug groups that made acne worse, the question was open ended, and was answered by 105 (72.9%). The commonest drugs implicated were antidepressants, anti-tuberculous drugs, oral contraceptive pills, iodine, halogens, nicotine and alcohol.

Acne vulgaris was considered a curable disease in the opinion of 76.1%, and only 55 (38.2%) believed it to be a preventable disease. The majority (96.3%) thought that they could diagnose it by physical examination and (12.5%) recommended laboratory investigations.

Regarding treatment, the most common drugs mentioned were oral antibiotics (93.7%) and topical tretinoin (retin-A) (90.9%). The suggested duration of pharmacological treatment was three months (40%), six months (23.2%), three weeks (22.5%) and (7.6%) were not sure.

Regarding non-pharmacological (non-drug) therapy, the vast majority (95.8%) suggested that cleaning of the skin gently but thoroughly with soap

and water, and removing all dirt or makeup are the best modalities.

The most common complication of acne vulgaris mentioned was scarring (61.1%). Psychological complications such as anxiety, depression, social isolation, and embarrassment were suggested by only a few (14.6%).

The attitudes of PHCPs when a patient with acne vulgaris presented to PHCC were variable. The majority (67.8%) would start him on drug therapy, 23.8% would refer the patient to the dermatologist, and the rest suggested counseling and using non-drug therapy modalities.

Regarding reasons that made the PHCC a suitable place for management of acne vulgaris were that the condition was easy to diagnose (71.8%), experience of PHCPs in managing such patients (60.8%), and availability of medications (53.9%). Regarding enough consultation time only 38.6% agreed. 15 (10.4%) stated other reasons such as counseling, health education and non-drug therapy modalities.

Reasons stated that PHCC was not a suitable place for management of acne vulgaris were lack of knowledge of PHCPs (6.5%), lack of medications (29.7%), problems with patient files (13.8%), lack of appointment system (15.2%), and unwillingness of patients to be treated by PHCP (23.9%). Other

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**Table 1: Reasons stated by PHCPs for not managing Acne vulgaris in PHCC distributed by gender, Riyadh, Saudi Arabia, 2000.**

| Reason                                     | Males<br>n = 76<br>n % | Females<br>n = 68<br>n % | Total<br>n = 144<br>n % | P-value |
|--|------------------------|--------------------------|-------------------------|---------|
| lack of knowledge                          |                        |                          |                         |         |
| Agree                                      | 5 (6.8)                | 4 (6.3)                  | 9 (6.5)                 | 0.82    |
| Disagree                                   | 69 (93.7)              | 60 (93.7)                | 129 (93.5)              |         |
| lack of medications                        |                        |                          |                         |         |
| Agree                                      | 18 (24.3)              | 23 (35.9)                | 41 (29.7)               | 0.19    |
| Disagree                                   | 56 (75.7)              | 41 (64.1)                | 97 (70.3)               |         |
| lack of with patient files                 |                        |                          |                         |         |
| Agree                                      | 6 (8.1)                | 13 (20.3)                | 19 (13.8)               | 0.07    |
| Disagree                                   | 68 (91.9)              | 51 (79.7)                | 119 (86.2)              |         |
| lack of appointment system                 |                        |                          |                         |         |
| Agree                                      | 8 (10.8)               | 13 (20.3)                | 21 (15.2)               | 0.19    |
| Disagree                                   | 66 (89.2)              | 51 (79.7)                | 117 (84.8)              |         |
| Patients not willing to be treated of PHCC |                        |                          |                         |         |
| Agree                                      | 15 (20.3)              | 18 (28.1)                | 33 (23.9)               | 0.38    |
| Disagree                                   | 59 (79.7)              | 46 (71.9)                | 105 (76.1)              |         |



# Knowledge, Attitude and Practice of physicians working in Primary Health Care centers towards Acne vulgaris, cont...

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reasons such as lack of laboratory investigations and patients need for a dermatologist were suggested by only 8 (5.6%).

Regarding education of patients with acne vulgaris, 41.4% claimed that they educated the patients always, 26.7% often, 28.0% sometimes, 2% rarely, and only 1.4% never educated their patients.

To improve their ability in management of acne vulgaris in the PHC-setting, the majority of physicians agreed on: provision of drugs (76.8%), improving their knowledge (76.8%), improvement of the referral system (52.5%), and improvement of a communication system between the hospital and the PHCC (9.2%).

The main sources of knowledge about acne vulgaris reported were Textbooks (90.8%), medical journals (59.2%), and colleagues (36.9%).

There were differences in the score of knowledge according to the PHCPs years of experience. Those with over 15 years of experience had a significantly better knowledge than the rest.

An attempt was made to categorize knowledge into poor and good based on the distribution of the scores. Results of scoring yielded 84% with good knowledge. Apart from the years of experience (p-value=0.03), none of the other variables such as age, sex, nationality, and qualifications, had any statistically significant association with knowledge.

– Reported by: Dr. Ahmad H. Al-Hazmi (Riyadh Health Region, MOH), Professor Jamal S. Al-Jarallah (Department of family and Community Medicine, College of Medicine, King Saud University).

**Editorial notes:** Acne vulgaris is a very common inflammatory skin disorder, which importance stems from its negative psychological consequences, including diminished self-esteem, social withdrawal due to embarrassment, depression and unemployment.<sup>1</sup>

It is encouraging that the majority of physicians in this survey were aware of the presentation of acne, however, only 14.8% were aware of its psychological

and emotional impact on patients.

The exact cause of acne vulgaris is still unknown.<sup>1,2</sup> In this study, about 80% of PHCPs correctly related the cause of acne to hormonal changes. Androgens, poor hygiene, exposure to oils or grease and heredity are the main factors that may help in the development of acne vulgaris in the opinion of most of the physicians in this study, which is consistent with the literature.<sup>1</sup>

Acne vulgaris is not a preventable or curable skin disorder, and the recurrence rate is high in young age, along with short duration of treatment.<sup>3</sup> In this study over 75% of PHCPs believed that acne is curable, and around 40% regarded it as preventable. This inaccurate knowledge should be addressed and modified.

Fortunately, the majority of PHCPs (86%) could diagnose acne vulgaris by physical examination only, while only a small number suggested laboratory investigations, which are well known not to be required.<sup>4</sup>

Most patients with acne present to primary care physicians for treatment and only a small proportion are referred to a dermatologist.<sup>3</sup> The opinions of PHCPs regarding whether the PHCC was a suitable place for management of acne vulgaris varied.

When PHCPs were asked about measures that can improve management of acne vulgaris in the PHC-centre, over half of them suggested improving knowledge of the PHCPs by providing training courses, improving the referral system at the PHCC, maintaining the availability of drugs at the PHCC, and

improving accessibility between the hospital and PHCCs.

Textbooks were reported to be the main source of knowledge for the majority of PHCPs about acne vulgaris, followed by medical journals. Only 5 physicians had received special training in dermatology.

The management of acne vulgaris should be the responsibility of the PHCC, referral being only indicated in severe or refractory cases. However, this survey showed inappropriate practice, and lack of knowledge among PHCPs towards this disease. The study should raise awareness of policy makers of the importance of continuing medical education for PHCPs in order to upgrade their knowledge and skills.

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## Hepatitis "A" Outbreak in Dhulai'a Rasheed, Al Qassiem region, 2006.

An increase in the number of Hepatitis A cases was reported from scattered villages in Dhulai'a Rasheed, Qassiem region. A case control study was conducted to describe this outbreak, identify possible risk factors and provide recommendations for control and prevention. A case was defined as any person living in Dhulai'a Rasheed governorate and presenting at one of the health facilities with jaundice and/or diagnosed as suffering from hepatitis A clinically and/or confirmed by laboratory tests during the period of 14/9/1426 to 1/4/1427 (18 October 2005 to 30 April 2006). Two controls were selected for each case. Data was collected by face to face interviews.

The outbreak occurred in the period between 11/08/1426 to 01/04/1427 H. The epidemic curve showed five peaks which most likely represented a person to person spread and maybe some sort of extended common source (Figure 1).

The cases were scattered in 20 different villages, with varied distances. Their ages ranged from 3-12 years (mean  $\pm$ SD =  $5.4 \pm 2.2$ ). There were 62 males (59.0%), and 43 females (41.0%). Nineteen were students attending different primary schools. All were Saudis. We were able to interview 210 controls who fulfilled the criteria of the control definition. Their ages ranged from 3-13 years (mean  $\pm$ SD =  $6.2 \pm 2.3$ ), there were 119 males (56.7%), and 91 females (43.3%), and 61 were students at primary schools, all were Saudis.

Significant Risk factors identified were contact with a known case (OR=1.7, 95% CI=1.01-2.95). The risk was much higher when the cases were relatives (OR=7.79, 95% CI=

1.10–67.13). Contact with a neighbor with jaundice (OR=4.44, 95% CI=2.15 - 9.23) was also statistically significant.

The study showed that 74.3% of cases washed their hands before eating, compared to 97.1% of controls (OR= 0.09, 95% CI= 0.03–0.21). Washing hands with water and soap before eating was reported by 5.1% of cases compared to 6.9% of controls (OR= 0.06, 95% CI= 0.01 – 0.31). Washing hands after eating was reported by 76.2% of cases, compared to 98.1% of controls (OR= 0.06, 95% CI= 0.02 - 0.18). Also, 73.3% of cases washed hands after going to toilet compared to 95.2% of controls (OR= 0.14, 95% CI= 0.06 – 0.29). Washing hands with water and soap after going to toilet was reported by 11.7% of cases, compared to 10.5% of controls (OR= 0.15, 95% CI= 0.05 - 0.50).

Immunization of the population at risk with Immunoglobulin (Ig) was carried out by the preventive department of Al Qassiem health directorate as part of the control measures applied. About 45.7% of controls had received the Ig, 30.5% of the cases had also been immunized, but they had received the Ig after acquiring the infection, therefore those who had received the Ig among the controls were protected against infection (OR= 0.52, 95% CI = 0.31 - 0.88).

There were 9 different water sources, represented by scattered shallow wells around Dhulai'a Rasheed area. The water was brought to the households by tank vehicles (Wayet) for all the 20 villages where the cases were reported. All the water samples which were taken from the

nine wells and also the samples from different households and schools were chemically and biologically contaminated and incompatible for human use. The schools and shops in these areas used the same sources of water that was used by the houses. Indeed, there was no general sewage system in these villages; each house had its own sewage system, such as: Bayara or artesian-well-hole. These artesian-well-holes used for sewage disposal are done by digging a deep hole down to 40 meters below earth. We found that 98.1% of cases and 100% of controls used Bayara for sewage disposal, and 1.9% of cases and none of the controls used artesian well-hole, which meant that the type of sewage disposal was not a risk factor for acquiring the infection.

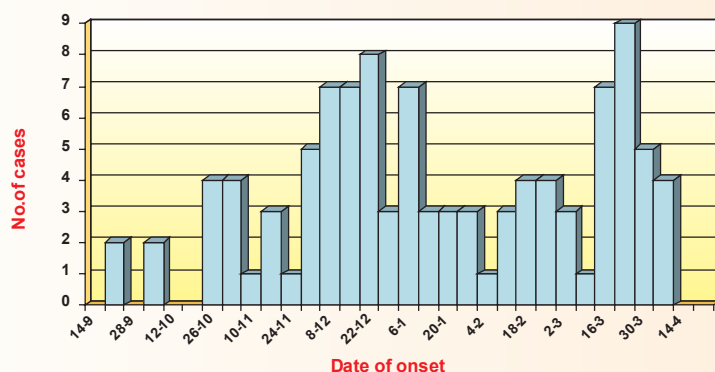
– Reported by: Dr. Osama AlHayani, Dr. Abdullah Al Rabeah, Dr. Nasser Al Hamdan (Field Epidemiology Training Program).

**Editorial Notes:** Hepatitis is a common medical condition caused by a wide range of viruses: A, B, C, D & E.

Hepatitis A is one of the oldest illnesses in human record. It occurs sporadically and epidemically worldwide, with a tendency to cyclic recurrences.<sup>1</sup> It is endemic in many parts of the world, including Saudi Arabia, where viral hepatitis A is a major cause of morbidity. It has been observed that nearly 41% of cases of viral hepatitis in western Saudi Arabia were due to HAV.<sup>1</sup> Hepatitis A is considered endemic in most of the villages of Al Qassiem region. However, several factors could explain this local upsurge of the disease. In this study, shallow wells represented the only source of water supply to Dhulai'a Rasheed area, and are possible extended common source of infection, whether in household or school environments. Also, a person-to-person transmission pattern could be established due to a low socio-hygienic status. Unfortunately, facilities for HAV isolation with sub typing were not available and the outbreak was disrupted by passive immunization of most of the population.

It is well known that the best methods

**Figure 1 : Date of onset for Hepatitis "A" cases, Dhulai'a Rasheed Qassim Region, 2006**



## ملخص باللغة العربية

### دراسة عن معرفة الأطباء استخدام المضادات الحيوية في علاج أمراض الجهاز التنفسي العلوي.

بالرغم من أن ٩٠-٩٥% من أمراض الجهاز التنفسي العلوي فيروسية الأصل، إلا إنه تستخدم المضادات الحيوية غالباً لعلاج هذه الأمراض الفيروسية. يؤدي الاستخدام المتكرر الخاطئ للمضادات الحيوية إلى نشوء بكتيريا مقاومة، لذا ينصح بعدم استخدام المضادات الحيوية وإذا استخدمت، تستخدم في أضيق الحدود ولفترة محدودة.

أجريت هذه الدراسة لتقييم معرفة الأطباء العاملين في أقسام الطوارئ، العيادات الخارجية للمستشفيات والمراكز الصحية الحكومية استخدام المضادات الحيوية في علاج أمراض الجهاز التنفسي العلوي، دراسة تأثير العوامل الشخصية للأطباء على معرفة الأطباء، دراسة العلاقة بين معرفة الأطباء ومدى تطبيقهم العملي لهذه المعرفة، وتقديم التوصيات المتعلقة بإيجاد إستراتيجية لتحسين نوعية العلاج المستخدم في أمراض الجهاز التنفسي العلوي.

قام فريق من برنامج الوبائيات الحقلية بدراسة مقطعية شملت مستشفيات ومراكز صحية حكومية تم فيها اخذ عينة عشوائية مكونة من ٣ مستشفيات و٢٠ مركز صحي حكومي. أنضم جميع الأطباء المقيمين إلى الدراسة وتم تعبئة الاستبيان عن طريق توزيعه على الأطباء.

شملت الدراسة ٢٦٧ طبيب، منهم ١٤٤ (٥٣,٩%) من المستشفيات و١٢٣ (٤٦,١%) من المراكز الصحية الحكومية. وجد أن متوسط أعمار الأطباء ٤٠,٣ سنة (الانحراف المعياري  $\pm ٨,٣$ ). شكل الأطباء السعوديين نسبة ١٩,٤% من مجموع الأطباء الذين شملتهم الدراسة. معظم الأطباء كانوا من الأطباء العاملين.

وجدت الدراسة أن ٨٦,٥% من الأطباء يصفون المضادات الحيوية لعلاج أمراض الجهاز التنفسي العلوي. وجد أن المضاد الحيوي اموكسيسيلين من أعلى المضادات الحيوية التي توصف وقد وصف من قبل ٥٧,٣% من الأطباء، وكان من أهم الأسباب التي أدت إلى استخدام المضادات المرتفعة إذا كانت الحالة العامة للمريض سيئة. وجد أن حوالي ٦٢,٥% من الأطباء تابعوا المرضى عند إعطائهم المضادات الحيوية.

من أهم أسباب عدم صرف الأطباء للمضادات الحيوية اعتقادهم أن معظم أمراض الجهاز التنفسي العلوي فيروسية الأصل ولكن ٥٥,٦% من الأطباء ذكروا أنهم قد يصفون المضادات الحيوية لمرضى الجهاز التنفسي العلوي إذا وجدوا أن لديهم

أمراض تنفسية مزمنة.

تمت التوصية على تدريب الأطباء بشكل كافٍ وتوفير ورش عمل ودورات قصيرة عن استخدامات المضادات الحيوية والعمل على إتاحة الفرصة للأطباء للحصول على المزيد من التدريب فيما يخص بعلاج أمراض الجهاز التنفسي العلوي وخاصة للأطباء العاملين في أقسام الطوارئ والعيادات الخارجية والمراكز الصحية الحكومية، إضافة إلى نشر الوعي لدى المجتمع حول المضادات الحيوية والمضاعفات المحتملة لدى استخدامها.

- إعداد: د. بدرية المالكي، د. عبدالجميل شودي (برنامج الوبائيات الحقلية).

### تقرير عن تفشي الالتهاب الكبدي الفيروسي (أ) في مركز ضليع رشيد والقرى التابعة لها في محافظة النبهانية بمنطقة القصيم، ربيع الثاني ١٤٢٧ هـ

تم التبليغ عن ازدياد عدد حالات التهاب الكبدي (أ) بشكل وبائي في مركز ضليع رشيد والقرى التابعة له والذي يبعد عن مدينة بريدة حوالي ١٨٠ كم. توجه فريق من برنامج الوبائيات الحقلية إلى منطقة القصيم وتم الاجتماع مع مدير الشؤون الصحية ومساعد المدير العام لمراكز الرعاية الصحية الأولية وأطباء قسم الطب الوقائي بالمديرية لمراجعة المعلومات المتوفرة عن الحالات والإجراءات التي قام بها القسم الوقائي، كما تمت زيارة مستشفى الرس ومقابلة مدير المستشفى (المشرف على الخدمات الصحية بمحافظة الرس ومحافظة النبهانية) وكذلك مدير مركز صحي ضليع رشيد والفريق الطبي المكلف متابعة حالات هذه الفاشية في المنطقة. تم إجراء دراسة ضابطة تهدف إلى وصف فاشية التهاب الكبد (أ) في ضليع رشيد بمنطقة القصيم، دراسة عوامل الخطورة المؤدية لحدوث الفاشية، التزويد بالمقترحات من أجل التحكم في الفاشية ومنع حدوثها مرة أخرى. وقد نفذت الدراسة على سكان المنطقة عن طريق الزيارات المنزلية، كما أخذت عينات عشوائية من مياه الآبار والمدارس والمنازل.

اكتشفت أول حالة بتاريخ ١١-٨-١٤٢٦ لطفل عمره ٣ سنوات في قرية ضليع رشيد حيث بلغ إجمالي عدد الحالات المسجلة منذ شهر شعبان ١٤٢٦ هـ إلى بداية شهر ربيع الثاني ١٤٢٧ حوالي ١٤٤ حالة. بلغ عدد الذكور المصابين ٨٨ (٦١%)، وعدد الإناث ٥٦ (٣٩%) وجميعهم سعوديين الجنسية (١٠٠%). معظم الحالات من الأطفال الذين يقل

عمرهم عن ٦ سنوات ومتوسط الأعمار ٤ سنوات وحوالي ١٩ حالة فقط من طلاب المدارس في المرحلة الابتدائية (١٣%).

بمراجعة حالات الالتهاب الكبدي (أ) خلال العام السابق، تبين تسجيل ٧٣ حالة فقط ولم تسجل أي حالة خلال نفس فترة الفاشية من العام السابق، وقد يكون هذا العدد أقل بكثير من الواقع، حيث أنه لا يوجد مختبر لفحص الالتهاب الكبدي (أ) وجميع المرضى الذين تظهر عليهم أعراض الصفار (Jaundice) يتم أخذ عينة دموية لهم وترسل للتحليل المخبري في مستشفى الرس للالتهاب الكبدي "ب" و"ج" فإذا ظهرت ايجابية تبلغ بينما النتائج السلبية فيتم متابعة الحالات دون التبليغ. وكذلك فإن أهالي المنطقة اعتادوا على هذا المرض فلا يحرسون على الذهاب للمركز الصحي لمتابعة الحالات.

لا يوجد بالمنطقة شبكة مياه محلاة تصل إلى المنازل بقرية ضليع رشيد والقرى المجاورة لها ويتزود الأهالي بالمياه عن طريق الوايتات التابعة للآبار السطحية في المنطقة حيث توجد حوالي ٩ آبار في المنطقة، ٨ منها تتبع المياه والتاسعة هي الشركة المتعهدة عن طريق مصلحة المياه بتزويد أهالي المنطقة بالمياه مجاناً وكل هذه الآبار مكشوفة وليس هناك متابعة أو رقابة عليها من ناحية وضع الكلور أو النظافة العامة، وكذلك لا توجد شبكة صرف صحي في المنطقة. الإصحاح البيئي بالمنطقة سيء، حيث شوهد طغح للمجاري بالشوارع العامة وكذلك قرب خزانات المياه من حفر المجاري، كما تنتشر القمامة بشكل واضح بين المنازل وداخل المدارس.

أما عن أسباب تفشي حالات الالتهاب الكبدي (أ) فقد يعود إلى العديد من الأسباب منها الإصحاح البيئي وعدم وجود الوعي الصحي فيما يتعلق بالنظافة الشخصية حيث ينتقل المرض من شخص لآخر وكذلك سوء حالة مياه الآبار في المنطقة.

تمت التوصية على التقيد باستمرار بالإجراءات الوقائية المتخذة من قبل الشؤون الصحية في القصيم وإدارة المراكز الصحية من حيث متابعة الحالات والمخالطين وتطعيمهم بالفاماغلوبولين ومراقبة مصادر المياه وصولاً إلى السيطرة على الوباء. كما تمت التوصية على التوعية الصحية بالمرض وطرق العدوى والمكافحة باستخدام الوسائل المتاحة، إضافة إلى مراقبة الآبار ومراقبة نوعية المياه المستمدة من الوايتات من قبل مصلحة المياه وفحص خلوها من الجراثيم وتقييم كمية الكلور في المياه.

- إعداد: د. أسامة الحياتي، د. عبدالله الربيعية، د. ناصر الحمدان (برنامج الوبائيات الحقلية).



# Hepatitis "A" Outbreak in Dhulai'a Rasheed, Cont...

(Continued from page 10)

of control and prevention at endemic areas depend on eliminating the source of infection and identification of the mode of transmission. It was clear that transmission was in favor of person-to-person and one of the major risk factors was the neglect of the cases to follow basic hygienic practices by washing hands at least after going to toilet and before eating. Good personal hygienic practices play a significant role in protection against acquiring infection.<sup>2</sup>

This outbreak of Hepatitis A is very similar to previous outbreaks that occurred at rural communities in the Kingdom, in which person-to-person transmission was implicated.<sup>4,5</sup> This outbreak can also be treated as an exacerbation of the endemic person-to-person, feco-oral transmission of disease which is prevalent in such areas with poor water supply and low socioeconomic status.<sup>2</sup>

Immunoglobulin mass immunization applied by the preventive department of Al Qassiem health Directorate was efficient in controlling the outbreak

when direct contacts were vaccinated. This was able to reduce the incidence of HAV secondary cases but could not stop new cases from appearing. Many studies consider passive immunization with immunoglobulin as the first choice in prevention and control of HAV epidemics and as a post exposure prophylaxis.<sup>6</sup> The effectiveness of the Ig lasts only for a few months, so it is required to be re-administered every three to six months.

The fact that scattered cases appeared in 20 villages within a period of 29 weeks may exclude the possibility of common source transmission. Drinking water from taps at houses or in the street was not associated with acquiring the disease, which proves that this was not a common source epidemic, which would have resulted in a much wider spread of cases and more family members would have been affected at the same time. However, the possibility of extended common source model could not be totally excluded, specially with the contamination of all water sources in the area and the significant association of drinking water from

the school cooler with acquiring the infection. Underreporting may also play a role of underestimation of the strong endemicity of HAV in Dhulai'a Rasheed area.

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## Mark your calendar . . .

### Inside the Kingdom

**Mark your April 08-10, 2007: Recent Advances in Infection Control, Symposium and Workshop.**

**Venue:** King Fahad Medical City Conference Hall, King Fahad Medical City, Riyadh, Kingdom of Saudi Arabia.

**Contact:** King Fahad Medical City

P.O.Box 59046, Riyadh 11525, Tel. +966-1-2889999

Fax. + 966-1-4614006, Website: [www.kfmc.med.sa](http://www.kfmc.med.sa)

### Outside the Kingdom

**September 2-6, 2006: International Conference on Environmental Epidemiology & Exposure**

**Venue:** la Villette Conférence Centre, Paris, France.

**Organizer:** French Agency for Environmental & Occupational Health Safety(afssset); 253 avenue du Général Leclerc F-94701 Maisons-Alfort Cedex, France

Téléphone: +33 1 56 29 19 30, Télécopie : +33 1 43 96 37 67

Website: <http://www.afssset.fr>, E-Mail : [afssset@afssset.fr](mailto:afssset@afssset.fr)

**November 12-17, 2006: 4th TEPHINET International Conference**

**Venue:** Blue Tree Park Hotel, Brasilia, Brazil

**Organizer:** Training Program in Epidemiology and Public Health Interventions Network (TEPHINET)

Website: <http://www.tephinnet.org>

## Knowledge and Practices of Physicians regarding prescription of antibiotics, cont...

(Continued from page 18)

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## Selected notifiable diseases by region, Jul - Sept 2006

|                       | Riyadh | Makkah | Jeddah | Madinah | Taif | Qassim | Eastern | Hasa | Hafr Al-batin | Asir | Bisha | Tabuk | Hail | Al-Shamal | Jizan | Najran | Baha | Al-Jouf | Goriat | Gonfuda | TOTAL |
|-----------------------|--------|--------|--------|---------|------|--------|---------|------|---------------|------|-------|-------|------|-----------|-------|--------|------|---------|--------|---------|-------|
| Measles               | 5      | 5      | 33     | 0       | 5    | 7      | 2       | 0    | 0             | 1    | 0     | 2     | 0    | 0         | 131   | 0      | 1    | 1       | 0      | 0       | 193   |
| Mumps                 | 5      | 1      | 2      | 0       | 0    | 8      | 2       | 2    | 0             | 1    | 0     | 0     | 1    | 1         | 1     | 0      | 0    | 0       | 0      | 0       | 24    |
| Rubella               | 1      | 0      | 3      | 0       | 0    | 0      | 0       | 0    | 0             | 0    | 0     | 0     | 0    | 0         | 1     | 0      | 0    | 0       | 0      | 0       | 5     |
| Varicella             | 964    | 92     | 580    | 433     | 120  | 1039   | 642     | 730  | 258           | 641  | 97    | 381   | 120  | 63        | 117   | 168    | 37   | 92      | 41     | 10      | 6625  |
| Meningitis mening.    | 0      | 0      | 1      | 0       | 0    | 0      | 1       | 0    | 0             | 0    | 1     | 0     | 0    | 0         | 1     | 0      | 0    | 0       | 0      | 0       | 4     |
| Meningitis other      | 22     | 1      | 26     | 7       | 6    | 5      | 4       | 2    | 0             | 0    | 0     | 7     | 1    | 1         | 0     | 1      | 0    | 4       | 0      | 0       | 87    |
| Hepatitis B           | 189    | 2      | 314    | 41      | 27   | 84     | 114     | 12   | 0             | 59   | 18    | 93    | 7    | 6         | 33    | 13     | 0    | 43      | 0      | 7       | 1062  |
| Hepatitis C           | 155    | 3      | 272    | 27      | 10   | 36     | 73      | 11   | 1             | 38   | 19    | 29    | 2    | 5         | 2     | 4      | 0    | 27      | 0      | 15      | 729   |
| Hepatitis unspecified | 12     | 0      | 19     | 0       | 0    | 0      | 1       | 10   | 0             | 15   | 0     | 18    | 0    | 0         | 31    | 0      | 0    | 0       | 0      | 0       | 106   |
| Hepatitis A           | 52     | 5      | 40     | 50      | 6    | 50     | 17      | 11   | 10            | 33   | 1     | 71    | 26   | 43        | 51    | 65     | 0    | 6       | 0      | 0       | 537   |
| Typhoid & paratyphoid | 4      | 24     | 0      | 1       | 0    | 2      | 6       | 6    | 0             | 11   | 1     | 1     | 7    | 1         | 2     | 2      | 0    | 1       | 0      | 8       | 77    |
| Amoebic dysentery     | 22     | 0      | 543    | 5       | 16   | 3      | 45      | 36   | 2             | 84   | 18    | 0     | 2    | 0         | 17    | 1      | 0    | 0       | 0      | 6       | 800   |
| Salmonelosis          | 113    | 1      | 76     | 1       | 0    | 6      | 123     | 49   | 11            | 6    | 17    | 13    | 0    | 0         | 0     | 14     | 0    | 31      | 0      | 0       | 461   |
| Brucellosis           | 109    | 2      | 8      | 47      | 51   | 144    | 68      | 6    | 85            | 154  | 43    | 13    | 88   | 27        | 17    | 47     | 1    | 4       | 0      | 0       | 914   |

## Comparisons of selected notifiable diseases, Jul - Sept. 2005 - 2006

| DISEASE                 | Apr - Jun 2006 | Apr - Jun 2005 | Change % | Jan - Jun 2006 | Jan-Dec 2005 | DISEASE               | Apr - Jun 2006 | Apr - Jun 2005 | Change % | Jan - Jun 2006 | Jan-Dec 2005 |
|-------------------------|----------------|----------------|----------|----------------|--------------|-----------------------|----------------|----------------|----------|----------------|--------------|
| Cholera                 | 4              | 4              | 0        | 8              | 16           | Meningitis mening     | 4              | 3              | 33       | 13             | 18           |
| Diphtheria              | 0              | 0              | 0        | 2              | 7            | Meningitis other      | 87             | 121            | -28      | 234            | 510          |
| Pertussis               | 15             | 12             | 25       | 27             | 21           | Hepatitis B           | 1062           | 1055           | 1        | 2172           | 4209         |
| Tetanus, neonat         | 2              | 8              | -75      | 12             | 22           | Hepatitis C           | 729            | 729            | 0        | 1513           | 2674         |
| Tetanus, other          | 2              | 3              | -33      | 7              | 10           | Hepatitis unspecified | 106            | 186            | -43      | 518            | 1179         |
| Poliomyelitis           | 0              | 0              | 0        | 0              | 0            | Hepatitis A           | 537            | 535            | 0        | 1634           | 2461         |
| Guillain Barre Syndrome | 33             | 15             | 120      | 91             | 103          | Amoebic dysentery     | 77             | 78             | -1       | 145            | 325          |
| Measles                 | 193            | 62             | 211      | 502            | 373          | Amoebic dysentery     | 800            | 697            | 15       | 1398           | 2806         |
| Mumps                   | 24             | 11             | 118      | 77             | 115          | Shigellosis           | 27             | 50             | -46      | 68             | 198          |
| Rubella                 | 5              | 2              | 150      | 21             | 18           | Salmonelosis          | 461            | 464            | -1       | 677            | 1349         |
| Varicella               | 6625           | 6651           | 0        | 35326          | 45389        | Brucellosis           | 914            | 993            | -8       | 2357           | 3804         |

## Diseases of low frequency, Jul - Sept 2006

Yellow fever, Plaque, Poliomyelitis, Rabies, Haemolytic Uraemic Syndrome: No Cases

Pertussis: 15 Cases (Qassim 8, Jeddah 4, Qunfudah 3)

Neonatal Tetanus: 2 Cases (Taif 1, Jeddah 1)

Ecchinococcosis: 3 Cases (Riyadh 2, Baha 1)

Guillain Barre Syndrome: 31 Cases (Tabuk 7, Riyadh 6, Eastern 5, Asir 4, Jazan 2, Hasa 2, Bisha 2, Madinah 1, Jeddah 1, Qassim 1)